

Claims

1. The use of a source of alkaline phosphatase for the manufacture of a medicament for the prevention or reduction of LPS toxicity at a mucosal lining of a mammalian body cavity.  
5
2. The use according to claim 1, wherein the prevention or reduction of LPS toxicity is for the prophylaxis or treatment of an LPS mediated or exacerbated disease.
- 10 3. The use according to claims 1 or 2, wherein the LPS mediated or exacerbated disease is selected from the group consisting of inflammatory bowel disease, sepsis/septic shock, systemic inflammatory response syndrome (SIRS), Meningococcemia, Trauma/hemorrhagic shock, burn injuries, cardiovascular surgery cardiopulmonary bypass, liver surgery/transplant, liver disease, pancreatitis, necrotizing enterocolitis, periodontal disease, pneumonia, cystic fibrosis, asthma, coronary heart disease, congestive heart failure, renal disease, hemolytic uremic syndrome, kidney dialysis, autoimmune diseases, cancer, Alzheimer, rheumatoid arthritis, lupus, systemic lupus erythematosus.  
15
- 20 4. The use according to any of the preceding claims wherein the source of alkaline phosphatase is administered orally.
5. The use according to any of the preceding claims wherein the body cavity is the gastro-intestinal tract.  
25
6. The use according to any of the preceding claims wherein the source of alkaline phosphatase is administered for the prophylaxis or treatment of an inflammatory disease of the GI tract.
- 30 7. The use according to any of the preceding claims wherein the inflammatory disease of the gastrointestinal tract is selected from the group consisting of: inflammatory bowel disease, Crohn's disease, colitis, colitis ulcerosa, hepatobiliary disease, hepatitis B, hepatitis C, liver cirrhosis, liver fibrosis, bile duct inflammation, biliary

obstruction, pancreatitis, acute pancreatitis, peritonitis, periodontal disease, enterocolitis, necrotising enterocolitis.

8. The use according to any of the preceding claims wherein the mucosal permeability  
5 of the gastro-intestinal tract for LPS is enhanced by a decreased perfusion or ischemia of the intestines.
9. The use according to claim 8 wherein the decreased perfusion or ischemia of the intestines is caused by cardiopulmonary bypass, surgery, trauma/wounds, burns,  
10 cardiac surgery, congenital heart disease, congestive heart failure, coronary heart disease, ischemic heart disease.
10. The use according to claim 1 wherein said source of alkaline phosphatase is administered via inhalation.  
15
11. The use according to claim 10 wherein the body cavity is the bronchial and /or the pulmonary mucosa of the respiratory tract.
12. The use according to claims 10 or 11 wherein the composition is administered for  
20 the prophylaxis or treatment of an inflammatory disease of the respiratory system.
13. The use according to any one of claims 10 to 12 wherein the disease is selected from the group consisting of pneumonia, lung infections, asthma, cystic fibrosis, bronchitis, emphysema.  
25
14. The use according to claim 1 wherein said source of alkaline phosphatase is administered topically at a mucosal layer.
15. The use according to claim 14 wherein the body cavity is selected from the group  
30 consisting of the nasal cavities, oral cavities, vagina and rectum.
16. The use according to claims 14 or 15 wherein the composition is administered for a local or systemic inflammatory disease.

17. The use according to any one of claims 14 or 16 wherein the disease is selected from the group consisting of infections of nasal, vaginal, oral, rectal cavities, vaginitis, sexually transmitted diseases and infection, urinary tract infections, periodontal disease.  
5
18. A composition comprising a source of alkaline phosphatase, optionally comprising pharmaceutically acceptable stabilisers, activators, carriers, permeators, propellants, disinfectants, protectants, diluents, nutrients and other excipients for delivering 10 alkaline phosphatase at the mucosa of a body cavity.
19. The composition according to claim 18 wherein the source of alkaline phosphatase is enterally coated for oral administration and delivery to the intestinal mucosa.
- 15 20. The composition of claims 18 or 19 wherein the alkaline phosphatase is a mammalian intestinal alkaline phosphatase, tissue non specific alkaline phosphatase, placental alkaline phosphatase and liver alkaline phosphatase.
21. The composition according to any one of claims 18 to 20 wherein the alkaline 20 phosphatase is human or bovine.
22. The composition according to any one of claims 18 to 21 wherein the composition is an alkaline phosphatase enriched food product or nutraceutical, suitable for oral ingestion and delivery of alkaline phosphatase to the mucosal lining of the gastro-25 intestinal tract.
23. The composition according to any one of claims 18 to 22 wherein the food product is an, optionally genetically modified plant, vegetable or fruit comprising a source of alkaline phosphatase.
- 30 24. The composition according to any one of claims 18 to 23 wherein the food product is a dairy product comprising a source of alkaline phosphatase.

25. The composition according to any one of claims 18 to 24 wherein the dairy product is a non-pasteurised or partially pasteurised milk or milk fraction.

26. The composition according to any one of claims 18 to 25 wherein the milk fraction  
5 is the milkfat globule membrane fraction.

27. Inhaling or spraying device loaded with a composition as defined in any one of claims 18 to 26 and a propellant and/or a nebuliser.